

Serial No. 10/773,288  
Amendment dated October 21, 2005

Atty. Docket No. 249/380  
Reply to Office action of July 21, 2005

### REMARKS/ARGUMENTS

Claims 1-12, 14-28 and 44-55 are pending in the subject application. Claim 44 is the sole independent claim. Claims 44 has been amended to more clearly recite the present invention. Claim 19 has been amended for clarity. Claims 22-28 and 49-54 have been withdrawn. No new matter has been added.

Applicants appreciate the Examiner's acknowledgement of applicants' claim for foreign priority and receipt of a certified copy of the priority document.

In the next Office action, the Examiner is respectfully requested to indicate whether the drawing figures filed on February 9, 2004 are acceptable.

Claims 1-12, 14-21 and 44-48 are presented to the Examiner for further prosecution on the merits.

#### A. Introduction

In the outstanding Office Action mailed July 21, 2005, the Examiner rejected claims 1-12, 14-26, 19-21 and 44-48 under 35 U.S.C. § 103(a) as being unpatentable over applicant's admitted prior art ("the AAPA reference") in combination with U.S. Patent No. 4,544,617 to Mort et al. ("the Mort et al. reference") and objected to claims 17, 18 and 55 as containing allowable subject matter but being dependent upon a rejected claim.

#### B. Asserted Obviousness Rejection

In the outstanding Office Action mailed, the Examiner rejected claims 1-12, 14-26, 19-21 and 44-48 under 35 U.S.C. § 103(a) as being unpatentable over the AAPA reference in combination with the Mort et al. reference. Claim 44 has been amended to more clearly recite the present invention. It is respectfully submitted that claim 44 as amended clearly defines the present invention over the applied art for at least the reasons set forth below.

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Claim 44 now recites, in part recites, in part, "a portion of the gate electrode across the interval has a flat surface." Support for this added language may be clearly seen, for example, by element 60 in FIGS. 3-10 and element 86 of FIGS. 11-12 of the original specification. Thus, no new matter has been added. Thus, the single electron transistor according to embodiments of the present invention is simple and easy to manufacture.

In contrast, FIG. 2 of the AAPA reference discloses a complex gate structure in which part of the control gate 40 extends between the depletion gates 38a and 38b. In neither FIGS. 1 nor 2 of the AAPA reference is the gate electrode opposite trap layers across an interval defining the region in which a quantum dot can be formed flat. The Mort et al. reference fails to provide a simpler gate structure as now clearly recited in claim 44.

It is respectfully submitted that neither the AAPA reference nor the Mort et al. reference, either alone or in combination, disclose or suggest the present invention as recited in claim 44. The remaining rejected claims depend, either directly or indirectly, from claim 44, and are believed to be allowable for at least the reasons set forth above. Therefore, it is respectfully requested that this rejection be withdrawn.

C. Allowable Subject Matter

The indication that claims 17, 18 and 55 contain allowable subject matter is gratefully acknowledged. However, it is respectfully submitted that all of the claims are in condition for allowance.

D. Conclusion

Since the cited prior art references neither anticipate nor render obvious the subject invention as presently claimed, applicants respectfully submit that claims 1-12, 14-21 and 44-48 are now in condition for allowance, that claims 22-28 and 49-54 be rejoined and a notice

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to that effect is respectfully requested

If the Examiner believes that additional discussions or information might advance the prosecution of the instant application, the Examiner is invited to contact the undersigned at the telephone number listed below to expedite resolution of any outstanding issues.

In view of the foregoing amendments and remarks, reconsideration of this application is earnestly solicited, and an early and favorable further action upon all the claims is hereby requested.

Respectfully submitted,  
LEE & MORSE, P.C.

Date: October 21, 2005

  
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**PETITION and  
DEPOSIT ACCOUNT CHARGE AUTHORIZATION**

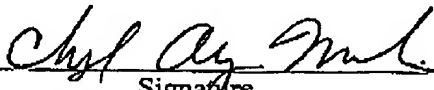
This document and any concurrently filed papers are believed to be timely. Should any extension of the term be required, applicant hereby petitions the Director for such extension and requests that any applicable petition fee be charged to Deposit Account No. 50-1645.

If fee payment is enclosed, this amount is believed to be correct. However, the Director is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-1645.

Any additional fee(s) necessary to effect the proper and timely filing of the accompanying papers may also be charged to Deposit Account No. 50-1645.

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